

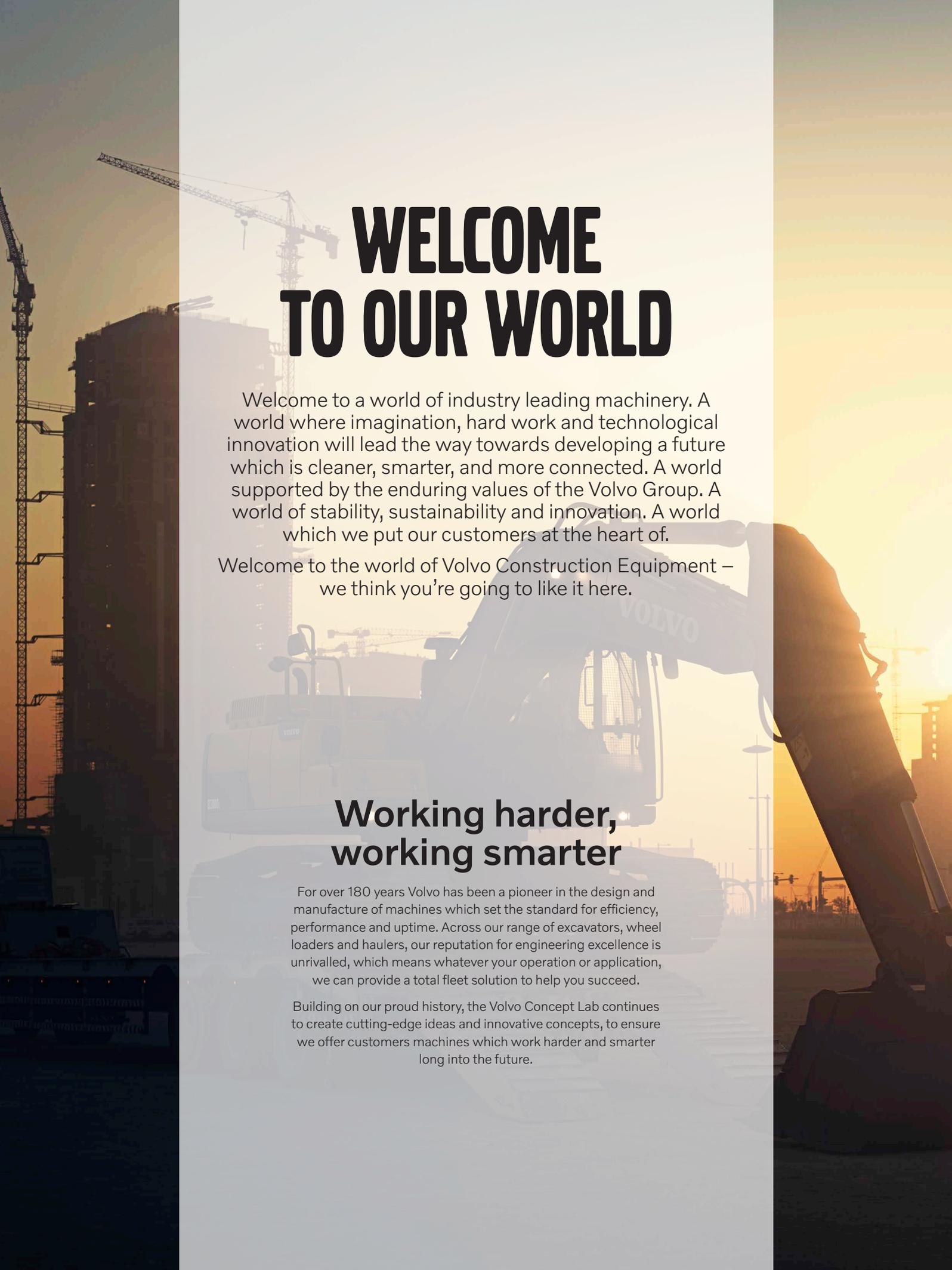
Volvo Construction Equipment  
Building Tomorrow



# EC950F

Volvo Excavators 91.3-94.8 t / 201,227-209,020 lb 603 hp





# WELCOME TO OUR WORLD

Welcome to a world of industry leading machinery. A world where imagination, hard work and technological innovation will lead the way towards developing a future which is cleaner, smarter, and more connected. A world supported by the enduring values of the Volvo Group. A world of stability, sustainability and innovation. A world which we put our customers at the heart of.

Welcome to the world of Volvo Construction Equipment – we think you're going to like it here.

## Working harder, working smarter

For over 180 years Volvo has been a pioneer in the design and manufacture of machines which set the standard for efficiency, performance and uptime. Across our range of excavators, wheel loaders and haulers, our reputation for engineering excellence is unrivalled, which means whatever your operation or application, we can provide a total fleet solution to help you succeed.

Building on our proud history, the Volvo Concept Lab continues to create cutting-edge ideas and innovative concepts, to ensure we offer customers machines which work harder and smarter long into the future.



## Solutions for you

Our industry leading machines are just the start of your relationship with Volvo. As your partner, we have developed an extensive range of additional solutions to help you improve uptime, boost productivity and reduce costs.

### Designed for your business

Structured across nine blocks, our portfolio of products and services are designed to complement your machine's performance and boost your profitability. Simply put, we offer some of the best guarantees, warranties and technological solutions in the industry today.

### There when you need us

Whether you're buying new or used, our global network of dealers and technicians offer around-the-clock support, including machine monitoring and world-class parts availability. It's the basis of everything offered by Volvo Services, so you can be confident we've got you covered right from the start.

**BUILDING TOMORROW**

# Big, powerful and productive

Do the big jobs better, stronger and faster with the EC950F. The 90 tonne crawler excavator offers the perfect combination of power and stability to handle a higher capacity in the toughest applications.

## Solid stability

The outstanding stability of the EC950F means operators can work with confidence in the most challenging environments. The well-balanced and solid machine features a wide track gauge, long track length, retractable undercarriage and an optimized counterweight which can be removed for ease of transportation.



## Powered by Volvo

Rely on a superior performance from the EC950F, featuring a powerful 450kW Volvo D16 engine, which delivers high torque at low rpm. The machine utilizes advanced technology built on decades of experience to ensure a highly productive operation.



## Comfortably productive

For operator convenience, all machine interfaces – including the joysticks, keypad and LCD monitor – are ergonomically positioned and designed for optimum control. The low-noise and spacious cab further enhances operator comfort and performance.



## Buckets to match

Maximize productivity with Volvo buckets, perfectly matched to your machine for ultimate digging results in all working conditions. Our range includes General Purpose and Heavy-Duty buckets, and when your application requires something more unique, we offer Custom-Built Attachments to develop the right solution for you.





# BIGGER MACHINE, BIGGER RESULTS

Gain more profitability in the EC950F, Volvo's largest crawler excavator. The 90 tonne excavator delivers a high bucket capacity for more tons per hour, achieving a fast and efficient on-site production.



# SUPERIOR DIGGING FORCE

Even in the harshest applications, the EC950F is up to the challenge. Experience superior digging force, particularly when working with hard and heavy materials, thanks to constant high hydraulic pressure delivering power to the machine when you need it.

# Peak performance

Job done. With the big and powerful EC950F, no task is too tough. Increase profitability with superior digging force, quick cycle times and outstanding fuel efficiency for a maximum return on investment.

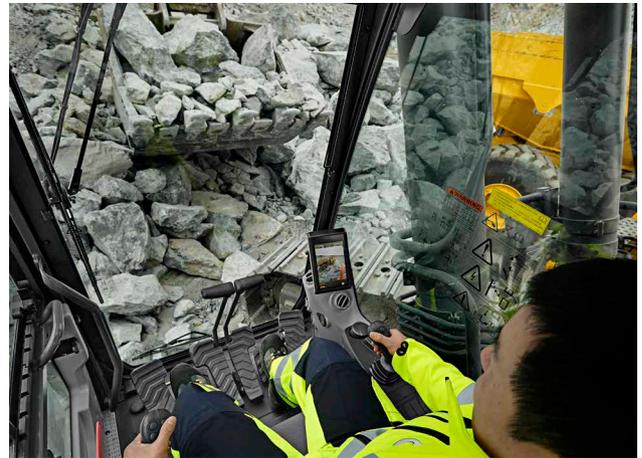
## Fast cycle times

Cut cycle times to a minimum with the fully electro-hydraulic system. The optimized hydraulics system increases pump power for a fast and smooth operation.



## Complete control

For a more efficient operation, the electro-hydraulic system puts superior control in the operator's hands. Utilizing intelligent technology, the easy-to-use system controls on-demand flow and reduces internal losses in the hydraulic circuit. What's more, the EC950F comes with a boom-swing priority valve.



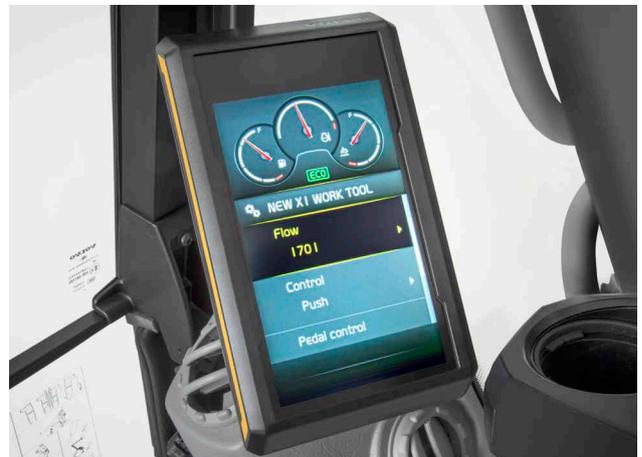
## Outstanding fuel efficiency

Achieve outstanding fuel efficiency with Volvo's unique ECO Mode and electro-hydraulic system. ECO Mode optimizes the hydraulic system to reduce loss of flow and pressure, while the integrated work mode allows operators to choose the best work mode for the task at hand: select from I (Idle), F (Fine), G (General) and H (Heavy).



## Do more

Take on a range of tasks in the hard-working EC950F. The attachment management system enhances machine versatility by storing settings for up to 20 different attachments, enabling the operator to pre-set hydraulic flow and pressure through the in-cab monitor.



# Always-on

Rely on maximum uptime with the big and durable EC950F – always ready to work. The machine's heavy-duty design, reliable and wear-resistant components, and easy service access ensure you will get the job done safely and without delay.

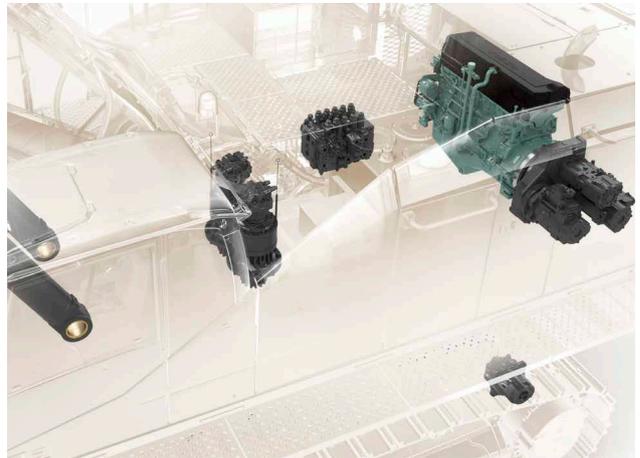
## Durable by design

Achieve non-stop production with the reliable EC950F, built with protected components to deliver maximum longevity in demanding applications. Outstanding machine protection is provided by features including a heavy-duty boom and arm, strong frame structure, heavy-duty underside plate and optional full-length track guard.



## Proven reliability

Count on a solid EC950F with Volvo's high-quality components, designed to work in perfect harmony with the machine. Volvo's commitment to rigorous testing in its development process ensures the production of well-engineered components, purpose-built for the job, and proven to be reliable in the toughest applications.



## Wear-resistant digging

For a prolonged bucket lifespan, Volvo offers a range of wear parts including segments, side cutters, shrouds and teeth. When working with heavily compacted material the Pick Point tooth provides maximum penetration, and the new Volvo Tooth System enables teeth changes in minutes: simply place, push and click – it's that easy to install.



## Safety first

Safety is built in to the machine thanks to a large entrance, including high visibility handrails and conveniently positioned steps, as well as anti-slip plates. The optional FOG (Falling Object Guard) and FOPS (Falling Object Protective Structure) provide further peace-of-mind when working in tough applications. For the ultimate in visibility, Volvo Smart View provides a 360° birds-eye-view around the machine, displayed on the in-cab monitor.





# EASY SERVICE ACCESS

Maximize uptime with quick and safe servicing. Essential maintenance points are easily accessed via the wide-opening and conveniently located compartment doors using central and surrounding walkways.



# EASY MACHINE MONITORING

Maximize machine uptime and reduce repair costs with ActiveCare Direct. Utilizing CareTrack data, the intelligent service provides round the clock machine monitoring and tailored customer reports, helping you to keep track of your fleet and take preventive maintenance actions.

# Keeping costs down

Engineering machines which deliver outstanding results is just the start of how we can support your operation. As your partner we are here to help with every aspect of your Volvo machinery. Our portfolio of services is designed to complement your machine's performance and boost your profitability.

## Volvo dealer network

Volvo has the right solution for you. By listening to your requirements, we can reduce your total cost of ownership and increase your revenue. With our extensive infrastructure of technicians, workshops and dealers, Volvo has a comprehensive network to fully support you using local knowledge and global experience.



## Machine diagnosis

Maximize machine uptime and reduce repair costs with ActiveCare Direct. The intelligent service provides around the clock machine monitoring, as well as customer reports, to help take predictive and preventative maintenance actions.



## Customer Support Agreements

The range of Customer Support Agreements offer preventive maintenance, total repairs and a number of uptime services. Volvo uses the latest technology to monitor machine operation and status, giving you advice to increase your profitability. By having a Customer Support Agreement you are in control of your service costs.



## 24-hours parts delivery guarantee

Maintain productivity and machine uptime with our range of readily available part, all backed by Volvo warranty – with 24-hour parts delivery guarantee. Only by using Genuine Volvo Parts, can you protect your investment, extend machine life and guarantee long-lasting performance.



# Go big

## THE OPERATOR'S CHOICE

- Spacious and quiet cab, ergonomic controls
- Boom-swing priority function
- Dig Assist, powered by Volvo Co-Pilot (Option)
- Straight travel pedal
- Pilot control pattern change

## ROBUST PROTECTION

- Heavy-duty boom and arm
- Additional underside plate
- Floating pins on the bucket connection

## VERSATILITY

- General Purpose and Heavy-Duty buckets
- Range of wear parts: teeth, side cutters, segments and wear shrouds
- Custom-Built Attachments for specific applications
- Attachment Management System: pre-set hydraulic flow and pressure



## EFFICIENTLY PRODUCTIVE

- Powerful 450kW Volvo D16 engine: high torque at low RPM
- Fully electro-hydraulic system
- Constant high hydraulic pressure for superior digging force
- ECO mode, Work modes

## KEEP ON DIGGING

- Easy service access, wide-opening compartment doors
- Volvo Tooth System: quick, easy and safe installation
- ActiveCare Direct: round-the-clock machine monitoring
- 24-hours parts delivery guarantee



## SAFETY FIRST

- High-visibility handrails
- Anti-slip plates
- Central and surrounding walkways
- Volvo Smart View

## SOLID STABILITY

- Wide track gauge
- Long track length
- Retractable tracks frame
- Optimized counterweight, hydraulically removable

# Volvo EC950F in detail

## Engine

The engine is a low emission, turbocharged air-to-air cooling, 4-stroke diesel engine with water cooling, direct injection controlled electronically, that meets EPA Tier 4 Final requirements. The engine has been developed especially for excavator use, providing good fuel efficiency, low sound level and a long service life.

**Air Filter** : 3-stage

**Automatic Idling System** : Reduces the engine speed to idle / when levers and pedals are not activated / resulting in less fuel consumption and low cab noise level.

Engine	Volvo	D16J
Max power at	r/min (r/s)	1,650 (27.5)
Net, ISO 9249/SAE J1349	kW (hp)	450 (603)
Gross, ISO 14396/SAE J1995	kW (hp)	449 (603)
Max torque	Nm (ft lbf)	2,700 (1,991)
at engine speed	r/min (r/s)	1,400 (23.3)
No. of cylinders		6
Displacement	l (in <sup>3</sup> )	16.1 (982)
Bore	mm (in)	144 (5.67)
Stroke	mm (in)	165 (6.5)

## Electrical system

Contronics, provides advanced monitoring of machine function and important diagnostic information.  
High capacity and well protected electrical system.  
Centrally located fuse and relay box using clearly arranged printed circuit board mounted, for easy access, behind the cab.  
A master switch is standard.

Voltage	V	24
Batteries	V	2 x 12
Battery capacity	Ah	210
Alternator	V/A	28/80

## Undercarriage

The undercarriage has a robust X-shaped frame. Greased and sealed track chains are standard.

Track shoes		51 x 2
Link pitch	mm (in)	260.4 (10.25)
Shoe width, double grouser	mm (in)	650/750/900 (26/30/36)
Bottom rollers		9 x 2
Top rollers		3 x 2

## Cab

The operator's cab has easy access via a wide door opening.  
The cab is supported on hydraulic dampening mounts to reduce shock and vibration levels.  
These along with a sound absorbing lining provide low noise levels.  
The cab has excellent all-round visibility.  
The front windshield can easily slide up into the ceiling, and the lower front glass can be removed and stored in the door.  
Integrated air conditioning and heating system: The pressurized and filtered cab air is supplied by automatically controlled fan. The air is distributed via 13 vents.  
Ergonomic operator's seat: The adjustable seat and joystick consoles move independently to accommodate the operator. The seat has nine different adjustments and a seat belt to meet any operator's comfort and safety.

## Swing system

The superstructure is slewed by two units of hydraulic piston motors with 2 stage planetary gear reduction box. Automatic swing holding brake and anti-rebound valve are equipped.

Max. slew speed	r/min	6.9
Max. slew torque	kNm (ft lbf)	343 (252,983)

## Travel System

Drive device: 2 step Hydraulic motor with 2 stage planetary reduction gears on each track.  
Framework: All-welded robust torsion box frame.  
Track Gauge: Retractable.

Max. drawbar pull	kN (lbf)	565 (127,008)
Max. travel speed (low)	km/h (mi/h)	2.8 (1.7)
Max. travel speed (high)	km/h (mi/h)	4.4 (2.7)
Gradeability	°	33

## Sound Level

Sound pressure level in cab according to ISO 6396

L <sub>pA</sub>	dB	74
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External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC

L <sub>WA</sub>	dB	111
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## Hydraulic system

The hydraulic system, also known as the "Automatic Sensing Work Mode", is designed for high-productivity, high-digging capacity, high-maneuvering precision and good fuel economy. The summation system, boom priority, arm priority, swing priority along with boom and arm regeneration provides optimum performance.

The following important functions are included in the system:

**Summation system**: Combines the flow of both hydraulic pumps to ensure quick cycle times and high productivity

**Boom priority**: Gives priority to the boom operation, for fast raising when loading or performing deep excavation.

**Arm priority**: Gives priority to the arm operation, for faster cycle times in leveling and for increased bucket filling when digging.

**Swing priority**: Gives priority to swing functions for faster

**Regeneration system**: Prevents cavitation and provides flow to other movements curing simultaneous operations for maximum productivity

**Holding valves**: Boom and arm holding valves prevent the digging equipment from creeping

Main pump. Type: 3 x variable displacement axial piston pumps

Maximum flow	l/min (gal/min)	2 x 515; 1 x 147 (2 x 136; 1 x 38.8)
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Pilot pump. Type: Gear pump

Maximum flow	l/min (gal/min)	1 x 37.8 (1 x 10)
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Relief value setting pressure

Implement	MPa (psi)	34.3 (4,980)
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Travel circuit	MPa (psi)	34.3 (4,980)
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Slew circuit	MPa (psi)	28.4 (4,130)
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Pilot circuit	MPa (psi)	3.9 (570)
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## Hydraulic Motors

**Travel**: Variable displacement axial piston motors

**Slew**: Fixed displacement axial piston motor with mechanical brake

## Hydraulic Cylinders

Mono boom		2
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Bore x Stroke	ø x mm (ø x in)	215 x 1 930 (8.5 x 76)
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Arm		1
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Bore x Stroke	ø x mm (ø x in)	240 x 2 180 (9.4 x 85.8)
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Bucket		1
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Bore x Stroke	ø x mm (ø x in)	200 x 1 500 (7.9 x 59.1)
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ME Bucket		1
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Bore x Stroke	ø x mm (ø x in)	230 x 1 500 (9.1 x 59.1)
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## Service Refill

Fuel tank	l (gal)	1 265 (334)
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Hydraulic system, total	l (gal)	890 (235)
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Hydraulic tank	l (gal)	460 (122)
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Engine oil	l (gal)	52 (14)
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Engine coolant	l (gal)	74 (20)
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Slew reduction unit	l (gal)	2 x 6.5 (2 x 1.7)
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Travel reduction unit	l (gal)	2 x 25 (2 x 6.6)
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PTO gear box	l (gal)	1 x 9.2 (1 x 2.4)
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# Specifications

## GROUND PRESSURE

Description		EC950F													
		Boom 7.25 m (23'9"), Arm 2.95m (9'8"), Bucket 4.7m <sup>3</sup> (6.15 yd <sup>3</sup> )							Boom 8.4 m (27'7"), Arm 3.7m (12'2"), Bucket 3.9m <sup>3</sup> (5.1 yd <sup>3</sup> )						
		Counterweight 16,200kg (35,715 lb)							Counterweight 16,200kg (35,715 lb)						
		Shoe width		Operating weight		Ground pressure		Overall width		Operating weight		Ground pressure		Overall width	
mm	in	kg	lb	kPa	psi	mm	ft/in	kg	lb	kPa	psi	mm	ft/in		
Double grouser	650	26	91,275	201,227	123.8	18	4,298	14' 1"	92,850	204,699	125.9	18.3	4,298	14' 1"	
	750	30	92,115	203,079	108.3	15.7	4,300	14' 1"	93,690	206,551	110.1	16	4,300	14' 1"	
	900	36	93,235	205,548	91.3	13.2	4,450	14' 7"	94,810	209,020	92.9	13.5	4,450	14' 7"	

## BUCKET SELECTION GUIDE

Bucket type			Capacity		Cutting width		Tip radius		Weight		Teeth	Recommended maximum material density (kg/m <sup>3</sup> / lb/yd <sup>3</sup> )					
												EC950F					
					7.25m (23'9") ME Boom			8.4m (27'7") GP Boom									
			I	yd <sup>3</sup>	mm	in	mm	ft/in	kg	lb	EA	M2.95m (9'8") Arm	M2.95m (9'8") Arm	G3.7m (12'2") Arm			
Direct fit Buckets without quick coupler	V4	GP	3,900	5.1	1,970	77.59	2,221	7' 3"	4,321	9,526	5	1,800	3,034	1,800	3,034	1,800	3,034
			4,700	6.15	2,000	78.7	2,348	7' 8"	4,648	10,247	5	1,800	3,034	1,800	3,034	1,800	3,034
			5,400	7.06	2,280	89.8	2,348	7' 8"	4,992	11,005	5	1,800	3,034	1,800	3,034	1,700	2,865
			6,000	7.85	2,350	92.5	2,446	8' 0"	5,233	11,537	5	1,800	3,034	1,700	2,865	1,500	2,528
			6,500	8.5	2,300	90.6	2,566	8' 5"	5,277	11,634	5	1,800	3,034	1,500	2,528	1,300	2,191
			7,000	9.16	2,450	96.5	2,566	8' 5"	5,583	12,308	6	1,800	3,034	1,400	2,360	1,200	2,023
	V4	HD	3,900	5.1	1,970	77.59	2,279	7' 6"	5,299	11,682	5	2,100	3,540	1,800	3,034	1,800	3,034
			4,700	6.15	2,000	78.7	2,404	7' 11"	5,722	12,615	5	2,100	3,540	1,800	3,034	1,800	3,034
			5,200	6.8	2,200	86.6	2,404	7' 11"	5,999	13,226	5	2,100	3,540	1,800	3,034	1,500	2,528
			5,400	7.06	2,280	89.8	2,404	7' 11"	6,137	13,530	5	2,100	3,540	1,700	2,865	1,500	2,528
			5,600	7.32	2,350	92.5	2,404	7' 11"	6,261	13,803	5	2,100	3,540	1,600	2,697	1,400	2,360
			6,000	7.85	2,350	92.5	2,505	8' 3"	6,198	13,664	5	2,100	3,540	1,500	2,528	1,300	2,191
	V6	EDX	6,500	8.5	2,300	90.6	2,620	8' 7"	6,264	13,810	5	2,000	3,371	1,400	2,360	1,200	2,023
			6,500	8.5	2,750	108.3	2,803	9' 2"	6,986	15,401	5	1,800	3,034	1,300	2,191	1,100	1,854

Please consult with your Volvo dealer for the proper match of buckets and attachments to suit the application.

(In case of using bigger bucket than regional standard MRS, consultation with R&D is highly recommended)

The recommendations are given as a guide only, based on typical operation conditions.

Bucket capacity based on ISO 7451, heaped material with a 1:1 angle of repose.

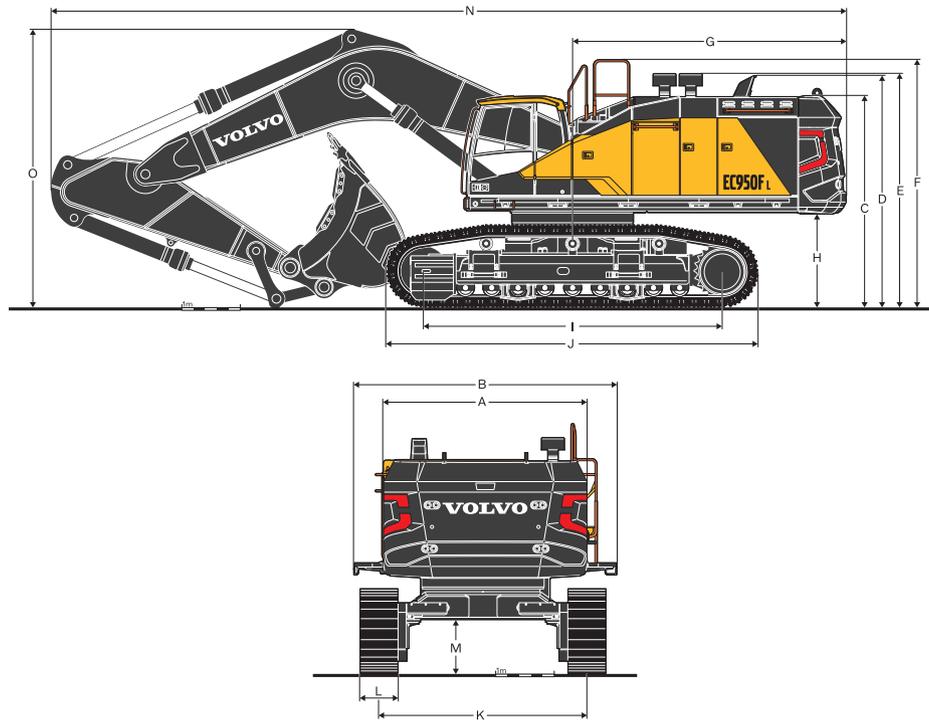
### Maximum material density

kg/m <sup>3</sup>	lb/yd <sup>3</sup>	
1,200~1,300	2,000~2,200	Coal, Caliche, Shale
1,400~1,600	2,300~2,700	Wet earth and clay, Limestone, Sandstone
1,700~1,800	2,800~3,100	Granite, Wet sand, Well blasted rock
1,900~	> 3,200~	Wet mud, Iron ore

X : Not recommended

# Specifications

## DIMENSIONS



Description		Unit		EC950F					
		m	ft in	7.25	23' 9"	8.4	27' 7"	8.4	27' 7"
<b>Boom</b>									
<b>Arm</b>									
A	Overall width of superstructure	mm	ft in	3,485	11' 5"	3,485	11' 5"	3,485	11' 5"
B	Overall width (incl. walkway)	mm	ft in	4,467	14' 8"	4,467	14' 8"	4,467	14' 8"
C	Overall height of cab	mm	ft in	3,655	12' 0"	3,655	12' 0"	3,655	12' 0"
D	Overall height of tail pipe	mm	ft in	3,990	13' 1"	3,990	13' 1"	3,990	13' 1"
E	Overall height of precleaner	mm	ft in	4,025	13' 2"	4,025	13' 2"	4,025	13' 2"
	Overall height of oil bath	mm	ft in	4,180	13' 9"	4,180	13' 9"	4,180	13' 9"
F	Overall height of guardrail	mm	ft in	4,263	14' 0"	4,263	14' 0"	4,263	14' 0"
G	Tail swing radius	mm	ft in	4,700	15' 5"	4,700	15' 5"	4,700	15' 5"
H	Counterweight clearance *	mm	ft in	1,623	5' 4"	1,623	5' 4"	1,623	5' 4"
I	Tumbler length	mm	ft in	5,120	16' 10"	5,120	16' 10"	5,120	16' 10"
J	Track length	mm	ft in	6,380	20' 11"	6,380	20' 11"	6,380	20' 11"
K	Track gauge(extended)	mm	ft in	3,550	11' 8"	3,550	11' 8"	3,550	11' 8"
	Track gauge (retracted)	mm	ft in	2,790	9' 2"	2,790	9' 2"	2,790	9' 2"
L	Shoe width	mm	ft in	650	2' 2"	650	2' 2"	650	2' 2"
M	Min. ground clearance *	mm	ft in	915	3' 0"	915	3' 0"	915	3' 0"
N	Overall length	mm	ft in	13,615	44' 8"	14,765	48' 5"	14,600	47' 11"
O	Overall height of boom	mm	ft in	4,950	16' 3"	4,875	16' 0"	4,905	16' 1"

\* With shoe grouser

Boom cylinder							
Length		Height		Width		Weight	
mm	ft in	mm	ft in	mm	ft in	kg	lb
3,000	9' 10"	600	2' 0"	480	1' 7"	1,800	3,968

Hose of Boom cylinder				
Length		Weight		Q'ty
mm	ft in	kg	lb	EA
1,250	4' 1"	5	11.0	2
1,170	3' 10"	4	8.8	2

Counterweight							
Length		Height		Width		Weight	
mm	ft in	mm	ft in	mm	ft in	kg	lb
3,485	11' 5"	2,150	7' 1"	830	2' 9"	16,100	35,494

Shoes									
Shoe width		Length		Height		Overall width		Weight / unit	
mm	in	mm	ft in	mm	ft in	mm	ft in	kg	lb
650	26"	6,380	20' 11"	1,445	4' 9"	1,085	3' 7"	12,930	28,506
750	30"	6,380	20' 11"	1,445	4' 9"	1,085	3' 7"	13,300	29,321
900	36"	6,380	20' 11"	1,445	4' 9"	1,160	3' 10"	13,860	30,556

Superstructure							
Length		Height of tail pipe		Width*		Weight	
mm	ft in	mm	ft in	mm	ft in	kg	lb
6,600	21' 8"	3,077	10' 1"	3,475	11' 5"	42,810	94,380

\*Upper structure rotated by 90deg (across)

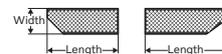
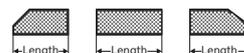
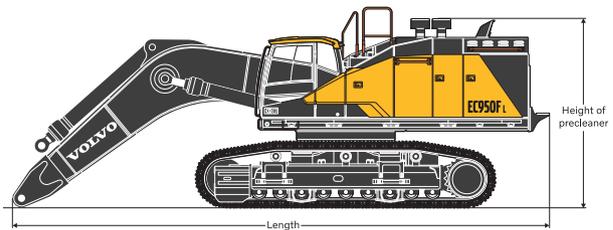
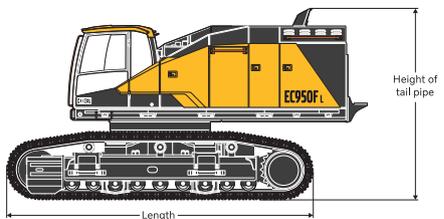
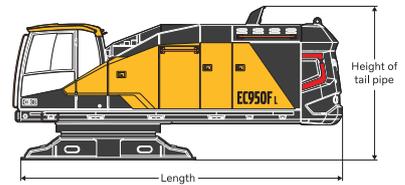
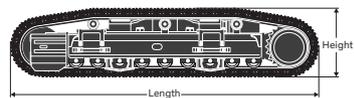
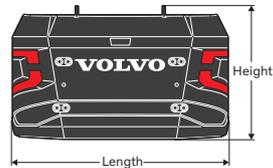
Basic machine (without counterweight)									
Shoe width		Length		Height of tail pipe		Overall width (retracted)		Weight	
mm	in	mm	ft in	mm	ft in	mm	ft in	kg	lb
650	26"	7,475	24' 6"	3,990	13' 1"	3,685	12' 1"	52,520	115,787
750	30"	7,475	24' 6"	3,990	13' 1"	3,685	12' 1"	53,270	117,440
900	36"	7,475	24' 6"	3,990	13' 1"	3,690	12' 1"	54,390	119,909

Superstructure, including UC and Boom, excluding CWT						
Boom	Shoe width		Length		Weight	
	mm	in	mm	ft in	kg	lb
7.25 m / 23' 9"	650	26"	11,332	37' 2"	79,150	174,496
	750	30"	11,332	37' 2"	79,990	176,348
	900	36"	11,332	37' 2"	81,110	178,817
8.4 m / 27' 7"	650	26"	12,555	41' 2"	79,600	175,488
	750	30"	12,555	41' 2"	80,440	177,340
	900	36"	12,555	41' 2"	81,560	179,809

Walkway								
Location	Length		Width		Height		Weight	
	mm	ft in	mm	ft in	mm	ft in	kg	lb
LH front	1,310	4' 4"	480	1' 7"	65	0' 3"	21	46.3
LH rear	1,545	5' 1"	480	1' 7"	65	0' 3"	25	55.1
RH front	1,020	3' 4"	480	1' 7"	65	0' 3"	17	37.5
RH rear	1,115	3' 8"	480	1' 7"	65	0' 3"	18	39.7
Middle	1,210	4' 0"	480	1' 7"	65	0' 3"	21	46.3

Lower frame with swing ring							
Length (A)		Width (B)		Height		Weight	
mm	ft in	mm	ft in	mm	ft in	kg	lb
3,500	11' 6"	2,520	8' 3"	1,095	3' 7"	7,455	16,435

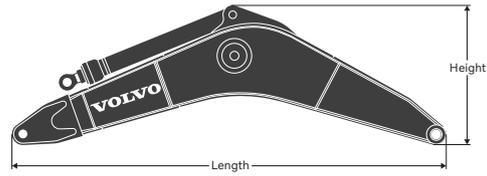
Superstructure w/o swing ring							
Length (A)		Height of tail pipe (B)		Width		Weight	
mm	ft in	mm	ft in	mm	ft in	kg	lb
6,195	20' 4"	2,508	8' 3"	3,475	11' 5"	19,025	41,943



# Specifications

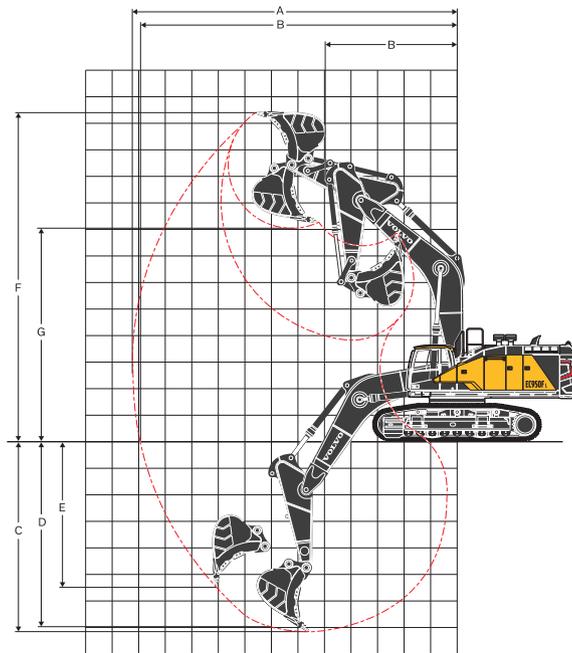
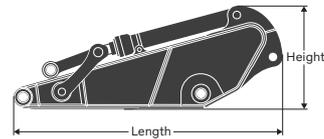
Description	Unit		EC950F			
	m	ft in	7.25	23'9"	8.4	27'7"
<b>Boom</b>						
A Length	mm	ft in	7,620	25' 0"	8,590	28' 2"
B Height	mm	ft in	2,580	8' 6"	2,395	7' 10"
Width	mm	ft in	1,100	3' 7"	1,100	3' 7"
Weight	kg	lb	9,580	21,120	9,130	20,128

\* Includes cylinder, piping and pin



Description	Unit		EC950F			
	m	ft in	2.95	9'8"	3.7	12'2"
<b>Arm</b>						
A Length	mm	ft in	4,470	14' 8"	5,210	17' 1"
B Height	mm	ft in	1,675	5' 6"	1,485	4' 10"
Width	mm	ft in	835	2' 9"	790	2' 7"
Weight	kg	lb	5,470	12,059	5,340	11,773

\* Includes bucket cylinder, linkage and pin



## WORKING RANGES

Description	Unit		EC950F					
	m	ft in	7.25	23' 9"	8.4	27' 7"	8.4	27' 7"
<b>Boom</b>								
A Max. digging reach	mm	ft in	12,270	40' 3"	13,480	44' 3"	14,020	46' 0"
B Max. digging reach on ground	mm	ft in	11,950	39' 2"	13,190	43' 3"	13,750	45' 1"
<b>Arm</b>								
C Max. digging depth	mm	ft in	7,120	23' 4"	8,330	27' 4"	8,950	29' 4"
D Max. digging depth (l = 2.44 m / 8'0" level)	mm	ft in	6,980	22' 11"	8,180	26' 10"	8,820	28' 11"
E Max. vertical wall digging depth	mm	ft in	5,390	17' 8"	6,450	21' 2"	7,300	23' 11"
F Max. cutting height	mm	ft in	12,410	40' 9"	13,100	43' 0"	13,280	43' 7"
G Max. dumping height	mm	ft in	8,090	26' 7"	8,790	28' 10"	9,200	30' 2"
H Min. front swing radius	mm	ft in	4,970	16' 4"	6,010	19' 9"	5,910	19' 5"

## DIGGING FORCES WITH DIRECT FIT BUCKET

Bucket radius		mm	ft in	2,348	7' 8"	2,348	7' 8"	2,221	7' 3"
Breakout force - bucket	ISO 6015	kN	lbf	478	107,459	478	107,459	388	87,226
	SAE J1179	kN	lbf	424	95,319	424	95,319	341	76,660
Tearout force - dipper arm	ISO 6015	kN	lbf	420	94,420	420	94,420	359	80,706
	SAE J1179	kN	lbf	408	91,722	408	91,722	350	78,683
Rotation angle, bucket		kN	lbf	170	38,218	170	38,218	170	38,218

**LIFTING CAPACITY EC950F**

Lifting capacity at the arm end without bucket. For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

	Lifting hook related to ground level	3.0 m / 10 ft		4.5 m / 15 ft		6.0 m / 20 ft		7.5 m / 25 ft		9.0 m / 30 ft		10.5 m / 35 ft		Max. reach			
		Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Max.									
Boom: 7.25 m ME 23'9" ME	9.0 m	kg						*23,410	*23,410					*20,920	*20,920	7.70 m	
	30 ft	lb						*51,610	*51,610					*46,121	*46,121	25.3 ft	
Arm: 2.95 m ME 9'8" ME	7.5 m	kg						*23,470	*23,470					*20,070	*20,070	8.71 m	
	25 ft	lb						*51,742	*51,742					*44,247	*44,247	28.6 ft	
Shoe: 650 mm 26"	6.0 m	kg		*37,080	*37,080	*29,020	*29,020	*24,780	*24,780	*22,380	20,830			*19,970	19,430	9.37 m	
	20 ft	lb		*81,747	*81,747	*63,978	*63,978	*54,630	*54,630	*49,339	45,922			*44,026	42,836	30.7 ft	
CWT: 16 100 kg 35,500 lb	4.5 m	kg				*32,710	*32,710	*26,610	*26,610	*23,110	20,330			*20,420	17,840	9.77 m	
	15 ft	lb				*72,113	*72,113	*58,665	*58,665	*50,949	44,820			*45,018	39,330	32.1 ft	
	3.0 m	kg				*35,880	*35,880	*28,340	*25,870	*23,900	19,770			*21,470	17,080	9.92 m	
	10 ft	lb				*79,102	*79,102	*62,479	57,034	*52,690	43,585			*47,333	37,655	32.5 ft	
	1.5 m	kg				*37,410	34,720	*29,400	25,060	*24,320	19,310			*22,040	17,010	9.84 m	
	5 ft	lb				*82,475	76,544	*64,816	55,248	*53,616	42,571			*48,590	37,501	32.3 ft	
	0 m	kg		*36,060	*36,060	*37,060	34,160	*29,360	24,600	*23,890	19,050			*22,100	17,660	9.52 m	
	0 ft	lb		*79,499	*79,499	*81,703	75,310	*64,728	54,234	*52,668	41,998			*48,722	38,934	31.2 ft	
	-1.5 m	kg	*31,400	*31,400	*43,770	*43,770	*34,900	34,100	*27,850	24,500				*21,980	19,270	8.95 m	
	-5 ft	lb	*69,225	*69,225	*96,496	*96,496	*76,941	75,178	*61,399	54,013				*48,458	42,483	29.4 ft	
	-3.0 m	kg	*43,890	*43,890	*37,740	*37,740	*30,610	*30,610	*24,000	*24,000				*21,280	*21,280	8.05 m	
	-10 ft	lb	*96,761	*96,761	*83,202	*83,202	*67,483	*67,483	*52,911	*52,911				*46,914	*46,914	26.4 ft	
	-4.5 m	kg			*28,200	*28,200	*22,570							*18,960	*18,960	6.71 m	
	-15 ft	lb			*62,170	*62,170	*49,758	*49,758						*41,800	*41,800	22.0 ft	
	Boom: 8.4 m GP 27'7" GP	10.5 m	kg												*20,930	*20,930	7.98 m
35 ft		lb												*46,143	*46,143	26.2 ft	
Arm: 2.95 m ME 9'8" ME	9.0 m	kg						*20,980	*20,980	*19,710	*19,710			*19,670	*19,670	9.21 m	
	30 ft	lb						*46,253	*46,253	*43,453	*43,453			*43,365	*43,365	30.2 ft	
Shoe: 650 mm 26"	7.5 m	kg						*22,100	*22,100	*19,870	*19,870			*19,040	17,190	10.07 m	
	25 ft	lb						*48,722	*48,722	*43,806	*43,806			*41,976	37,897	33.0 ft	
CWT: 16 100 kg 35,500 lb	6.0 m	kg				*29,430	*29,430	*23,880	*23,880	*20,700	20,270	*18,820	15,760	*18,710	15,370	10.65 m	
	20 ft	lb				*64,882	*64,882	*52,646	*52,646	*45,636	44,688	*41,491	34,745	*41,248	33,885	34.9 ft	
	4.5 m	kg					*25,850	25,550	*21,740	19,530	*19,180	15,420	*18,560	14,300	11.00 m		
	15 ft	lb					*56,989	56,328	*47,928	43,056	*42,285	33,995	*40,918	31,526	36.1 ft		
	3.0 m	kg					*27,440	24,390	*22,660	18,840	*19,550	15,040	*18,510	13,770	11.13 m		
	10 ft	lb					*60,495	53,771	*49,957	41,535	*43,100	33,157	*40,808	30,358	36.5 ft		
	1.5 m	kg					*28,220	23,610	*23,170	18,300	*19,660	14,730	*18,490	13,690	11.06 m		
	5 ft	lb					*62,214	52,051	*51,081	40,345	*43,343	32,474	*40,763	30,181	36.3 ft		
	0 m	kg				*34,670	32,350	*28,010	23,220	*23,050	17,990	*19,190	14,580	*18,440	14,090	10.78 m	
	0 ft	lb				*76,434	71,319	*61,751	51,191	*50,816	39,661	*42,307	32,143	*40,653	31,063	35.4 ft	
	-1.5 m	kg					*32,520	32,470	*26,770	23,160	*22,030	17,930		*18,250	15,080	10.28 m	
	-5 ft	lb					*71,694	71,584	*59,018	51,059	*48,568	39,529		*40,234	33,246	33.7 ft	
	-3.0 m	kg			*33,510	*33,510	*29,220	*29,220	*24,290	23,400	*19,590	18,180		*17,720	16,990	9.51 m	
	-10 ft	lb			*73,877	*73,877	*64,419	*64,419	*53,550	51,588	*43,189	40,080		*39,066	37,456	31.2 ft	
	-4.5 m	kg			*27,570	*27,570	*24,190	*24,190	*19,820	*19,820				*16,380	*16,380	8.41 m	
-15 ft	lb			*60,781	*60,781	*53,330	*53,330	*43,696	*43,696				*36,112	*36,112	27.6 ft		
-6.0 m	kg					*15,720	*15,720								6.81 m		
-20 ft	lb					*34,657	*34,657								22.3 ft		
Boom: 8.4 m GP 27'7" GP	10.5 m	kg												*14,500	*14,500	8.90 m	
	35 ft	lb												*31,967	*31,967	29.2 ft	
Arm: 3.7 m GP 12'2" GP	9.0 m	kg								*18,180	*18,180			*13,720	*13,720	10.02 m	
	30 ft	lb								*40,080	*40,080			*30,247	*30,247	32.9 ft	
Shoe: 650 mm 26"	7.5 m	kg								*18,690	*18,690	*17,500	16,360	*13,390	*13,390	10.81 m	
	25 ft	lb								*41,204	*41,204	*38,581	36,068	*29,520	*29,520	35.5 ft	
CWT: 16 100 kg 35,500 lb	6.0 m	kg				*27,360	*27,360	*22,580	*22,580	*19,710	*19,710	*17,890	16,070	*13,400	*13,400	11.36 m	
	20 ft	lb				*60,318	*60,318	*49,780	*49,780	*43,453	*43,453	*39,441	35,428	*29,542	*29,542	37.3 ft	
	4.5 m	kg				*31,370	*31,370	*24,760	*24,760	*20,940	19,880	*18,500	15,640	*13,660	13,110	11.68 m	
	15 ft	lb				*69,159	*69,159	*54,586	*54,586	*46,165	43,828	*40,785	34,480	*30,115	28,903	38.3 ft	
	3.0 m	kg				*34,530	34,330	*26,690	24,900	*22,100	19,120	*19,110	15,190	*14,230	12,640	11.81 m	
	10 ft	lb				*76,126	75,685	*58,841	54,895	*48,722	42,152	*42,130	33,488	*31,372	27,866	38.7 ft	
	1.5 m	kg				*35,920	33,030	*29,920	23,950	*22,900	18,490	*19,500	14,810	*15,110	12,550	11.74 m	
	5 ft	lb				*79,190	72,819	*61,553	52,801	*50,486	40,763	*42,990	32,650	*33,312	27,668	38.5 ft	
	0 m	kg				*35,660	32,480	*28,230	23,380	*23,140	18,070	*19,460	14,550	*16,480	12,850	11.48 m	
	0 ft	lb				*78,617	71,606	*62,236	51,544	*51,015	39,837	*42,902	32,077	*36,332	28,329	37.7 ft	
	-1.5 m	kg			*28,820	*28,820	*34,160	32,390	*27,540	23,160	*22,620	17,880	*18,670	14,470	*17,270	13,610	11.01 m
	-5 ft	lb			*63,537	*63,537	*75,310	71,408	*60,715	51,059	*49,869	39,419	*41,160	31,901	*38,074	30,005	36.1 ft
	-3.0 m	kg	*29,970	*29,970	*38,250	*38,250	*31,480	*31,480	*25,720	23,230	*21,020	17,940		*17,040	15,050	10.29 m	
	-10 ft	lb	*66,072	*66,072	*84,327	*84,327	*69,401	*69,401	*56,703	51,213	*46,341	39,551		*37,567	33,180	33.8 ft	
	-4.5 m	kg	*37,450	*37,450	*32,640	*32,640	*27,300	*27,300	*22,370	*22,370	*17,490	*17,490		*16,330	*16,330	9.29 m	
-15 ft	lb	*82,563	*82,563	*71,959	*71,959	*60,186	*60,186	*49,317	*49,317	*38,559	*38,559		*36,001	*36,001	30.5 ft		
-6.0 m	kg			*24,420	*24,420	*20,710	*20,710	*16,030					*14,450	*14,450	7.87 m		
-20 ft	lb			*53,837	*53,837	*45,658	*45,658	*35,340	*35,340				*31,857	*31,857	25.8 ft		

- Notes: 1. Machine in "Fine Mode-F" (Power Boost) for lifting capacities.
- 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards.
- 3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load.
- 4. Rated loads marked with an asterisk (\*) are limited by hydraulic capacity rather than tipping load.

# Specifications

## LIFTING CAPACITY EC950F

Lifting capacity at the arm end without bucket. For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

	Lifting hook related to ground level	3.0 m / 10 ft		4.5 m / 15 ft		6.0 m / 20 ft		7.5 m / 25 ft		9.0 m / 30 ft		10.5 m / 35 ft		Max. reach		
		Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Max.								
Boom: 7.25 m ME 23'9" ME	9.0 m kg							*23,410	*23,410					*20,920	*20,920	7.70 m
	30 ft lb							*51,610	*51,610					*46,121	*46,121	25.3 ft
Arm: 2.95 m ME 9'8" ME	7.5 m kg							*23,470	*23,470					*20,070	*20,070	8.71 m
	25 ft lb							*51,742	*51,742					*44,247	*44,247	28.6 ft
Shoe: 750 mm 30"	6.0 m kg			*37,080	*37,080	*29,020	*29,020	*24,780	*24,780	*22,380	21,000			*19,970	19,590	9.37 m
	20 ft lb			*81,747	*81,747	*63,978	*63,978	*54,630	*54,630	*49,339	46,297			*44,026	43,189	30.7 ft
CWT: 16 100 kg 35,500 lb	4.5 m kg					*32,710	*32,710	*26,610	*26,610	*23,110	20,500			*20,420	17,990	9.77 m
	15 ft lb					*72,113	*72,113	*58,665	*58,665	*50,949	45,195			*45,018	39,661	32.1 ft
	3.0 m kg					*35,880	*35,880	*28,340	26,080	*23,900	19,940			*21,470	17,230	9.92 m
	10 ft lb					*79,102	*79,102	*62,479	57,496	*52,690	43,960			*47,333	37,986	32.5 ft
	1.5 m kg					*37,410	35,010	*29,400	25,280	*24,320	19,480			*22,040	17,160	9.84 m
	5 ft lb					*82,475	77,184	*64,816	55,733	*53,616	42,946			*48,590	37,831	32.3 ft
	0 m kg			*36,060	*36,060	*37,060	34,450	*29,360	24,810	*23,890	19,220			*22,100	17,810	9.52 m
	0 ft lb			*79,499	*79,499	*81,703	75,949	*64,728	54,697	*52,668	42,373			*48,722	39,264	31.2 ft
	-1.5 m kg	*31,400	*31,400	*43,770	*43,770	*34,900	34,400	*27,850	24,720					*21,980	19,450	8.95 m
	-5 ft lb	*69,225	*69,225	*96,496	*96,496	*76,941	75,839	*61,399	54,498					*48,458	42,880	29.4 ft
	-3.0 m kg	*43,890	*43,890	*37,740	*37,740	*30,610	*30,610	*24,000	*24,000					*21,280	*21,280	8.05 m
	-10 ft lb	*96,761	*96,761	*83,202	*83,202	*67,483	*67,483	*52,911	*52,911					*46,914	*46,914	26.4 ft
	-4.5 m kg			*28,200	*28,200	*22,570	*22,570							*18,960	*18,960	6.71 m
	-15 ft lb			*62,170	*62,170	*49,758	*49,758							*41,800	*41,800	22.0 ft
Boom: 8.4 m GP 27'7" GP	10.5 m kg													*20,930	*20,930	7.98 m
	35 ft lb													*46,143	*46,143	26.2 ft
Arm: 2.95 m ME 9'8" ME	9.0 m kg							*20,980	*20,980	*19,710	*19,710			*19,670	*19,670	9.21 m
	30 ft lb							*46,253	*46,253	*43,453	*43,453			*43,365	*43,365	30.2 ft
Shoe: 750 mm 30"	7.5 m kg							*22,100	*22,100	*19,870	*19,870			*19,040	17,340	10.07 m
	25 ft lb							*48,722	*48,722	*43,806	*43,806			*41,976	38,228	33.0 ft
CWT: 16 100 kg 35,500 lb	6.0 m kg					*29,430	*29,430	*23,880	*23,880	*20,700	20,440	*18,820	15,900	*18,710	15,510	10.65 m
	20 ft lb					*64,882	*64,882	*52,646	*52,646	*45,636	45,062	*41,491	35,053	*41,248	34,194	34.9 ft
	4.5 m kg							*25,850	25,760	*21,740	19,700	*19,180	15,560	*18,560	14,440	11.00 m
	15 ft lb							*56,989	56,791	*47,928	43,431	*42,285	34,304	*40,918	31,835	36.1 ft
	3.0 m kg							*27,440	24,610	*22,660	19,010	*19,550	15,180	*18,510	13,900	11.13 m
	10 ft lb							*60,495	54,256	*49,957	41,910	*43,100	33,466	*40,808	30,644	36.5 ft
	1.5 m kg							*28,220	23,830	*23,170	18,470	*19,660	14,880	*18,490	13,830	11.06 m
	5 ft lb							*62,214	52,536	*51,081	40,719	*43,343	32,805	*40,763	30,490	36.3 ft
	0 m kg					*34,670	32,640	*28,010	23,430	*23,050	18,160	*19,190	14,720	*18,440	14,230	10.78 m
	0 ft lb					*76,434	71,959	*61,751	51,654	*50,816	40,036	*42,307	32,452	*40,653	31,372	35.4 ft
	-1.5 m kg					*32,520	*32,520	*26,770	23,370	*22,030	18,100			*18,250	15,230	10.28 m
	-5 ft lb					*71,694	*71,694	*59,018	51,522	*48,568	39,904			*40,234	33,576	33.7 ft
	-3.0 m kg			*33,510	*33,510	*29,220	*29,220	*24,290	23,610	*19,590	18,350			*17,720	17,140	9.51 m
	-10 ft lb			*73,877	*73,877	*64,419	*64,419	*53,550	52,051	*43,189	40,455			*39,066	37,787	31.2 ft
-4.5 m kg			*27,570	*27,570	*24,190	*24,190	*19,820	*19,820					*16,380	*16,380	8.41 m	
-15 ft lb			*60,781	*60,781	*53,330	*53,330	*43,696	*43,696					*36,112	*36,112	27.6 ft	
-6.0 m kg					*15,720	*15,720									6.81 m	
-20 ft lb					*34,657	*34,657									22.3 ft	
Boom: 8.4 m GP 27'7" GP	10.5 m kg													*14,500	*14,500	8.90 m
	35 ft lb													*31,967	*31,967	29.2 ft
Arm: 3.7 m GP 12'2" GP	9.0 m kg									*18,180	*18,180			*13,720	*13,720	10.02 m
	30 ft lb									*40,080	*40,080			*30,247	*30,247	32.9 ft
Shoe: 750 mm 30"	7.5 m kg									*18,690	*18,690	*17,500	16,500	*13,390	*13,390	10.81 m
	25 ft lb									*41,204	*41,204	*38,581	36,376	*29,520	*29,520	35.5 ft
CWT: 16 100 kg 35,500 lb	6.0 m kg					*27,360	*27,360	*22,580	*22,580	*19,710	*19,710	*17,890	16,210	*13,400	*13,400	11.36 m
	20 ft lb					*60,318	*60,318	*49,780	*49,780	*43,453	*43,453	*39,441	35,737	*29,542	*29,542	37.3 ft
	4.5 m kg					*31,370	*31,370	*24,760	*24,760	*20,940	20,050	*18,500	15,780	*13,660	13,230	11.68 m
	15 ft lb					*69,159	*69,159	*54,586	*54,586	*46,165	44,203	*40,785	34,789	*30,115	29,167	38.3 ft
	3.0 m kg					*34,530	*34,530	*26,690	25,120	*22,100	19,290	*19,110	15,330	*14,230	12,770	11.81 m
	10 ft lb					*76,126	*76,126	*58,841	55,380	*48,722	42,527	*42,130	33,797	*31,372	28,153	38.7 ft
	1.5 m kg					*35,920	33,320	*29,720	24,170	*22,900	18,660	*19,500	14,950	*15,110	12,680	11.74 m
	5 ft lb					*79,190	73,458	*61,553	53,286	*50,486	41,138	*42,990	32,959	*33,312	27,950	38.5 ft
	0 m kg					*35,660	32,770	*28,230	23,600	*23,140	18,240	*19,460	14,690	*16,480	12,970	11.48 m
	0 ft lb					*78,617	72,245	*62,236	52,029	*51,015	40,212	*42,902	32,386	*36,332	28,594	37.7 ft
	-1.5 m kg			*28,820	*28,820	*34,160	32,680	*27,540	23,370	*22,620	18,050	*18,670	14,610	*17,270	13,740	11.01 m
	-5 ft lb			*63,537	*63,537	*75,310	72,047	*60,715	51,522	*49,869	39,793	*41,160	32,209	*38,074	30,291	36.1 ft
	-3.0 m kg	*29,970	*29,970	*38,250	*38,250	*31,480	*31,480	*25,720	23,450	*21,020	18,110			*17,040	15,190	10.29 m
	-10 ft lb	*66,072	*66,072	*84,327	*84,327	*69,401	*69,401	*56,703	51,698	*46,341	39,926			*37,567	33,488	33.8 ft
-4.5 m kg	*37,450	*37,450	*32,640	*32,640	*27,300	*27,300	*22,370	*22,370	*17,490	*17,490			*16,330	*16,330	9.29 m	
-15 ft lb	*82,563	*82,563	*71,959	*71,959	*60,186	*60,186	*49,317	*49,317	*38,559	*38,559			*36,001	*36,001	30.5 ft	
-6.0 m kg			*24,420	*24,420	*20,710	*20,710	*16,030	*16,030					*14,450	*14,450	7.87 m	
-20 ft lb			*53,837	*53,837	*45,658	*45,658	*35,340	*35,340					*31,857	*31,857	25.8 ft	

1. Machine in "Fine Mode-F" (Power Boost) for lifting capacities.
2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards.
3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load.
4. Rated loads marked with an asterisk (\*) are limited by hydraulic capacity rather than tipping load.

**LIFTING CAPACITY EC950F**

Lifting capacity at the arm end without bucket. For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

	Lifting hook related to ground level	3.0 m / 10 ft		4.5 m / 15 ft		6.0 m / 20 ft		7.5 m / 25 ft		9.0 m / 30 ft		10.5 m / 35 ft		Max. reach			
		Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Max.									
Boom: 7.25 m ME 23'9" ME	9.0 m	kg						*23,410	*23,410					*20,920	*20,920	7.70 m	
	30 ft	lb						*51,610	*51,610					*46,121	*46,121	25.3 ft	
Arm: 2.95 m ME 9'8" ME	7.5 m	kg						*23,470	*23,470					*20,070	*20,070	8.71 m	
	25 ft	lb						*51,742	*51,742					*44,247	*44,247	28.6 ft	
Shoe: 900 mm 36"	6.0 m	kg			*37,080	*37,080	*29,020	*29,020	*24,780	*24,780	*22,380	21,230			*19,970	*19,970	9.37 m
	20 ft	lb			*81,747	*81,747	*63,978	*63,978	*54,630	*54,630	*49,339	46,804			*44,026	*44,026	30.7 ft
CWT: 16 100 kg 35,500 lb	4.5 m	kg					*32,710	*32,710	*26,610	*26,610	*23,110	20,730			*20,420	18,200	9.77 m
	15 ft	lb					*72,113	*72,113	*58,665	*58,665	*50,949	45,702			*45,018	40,124	32.1 ft
	3.0 m	kg					*35,880	*35,880	*28,340	*26,370	*23,900	20,170			*21,470	17,430	9.92 m
	10 ft	lb					*79,102	*79,102	*62,479	58,136	*52,690	44,467			*47,333	38,427	32.5 ft
	1.5 m	kg					*37,410	35,410	*29,400	25,570	*24,320	19,710			*22,040	17,370	9.84 m
	5 ft	lb					*82,475	78,066	*64,816	56,372	*53,616	43,453			*48,590	38,294	32.3 ft
	0 m	kg			*36,060	*36,060	*37,060	34,840	*29,360	25,100	*23,890	19,450			*22,100	18,030	9.52 m
	0 ft	lb			*79,499	*79,499	*81,703	76,809	*64,728	55,336	*52,668	42,880			*48,722	39,749	31.2 ft
	-1.5 m	kg	*31,400	*31,400	*43,770	*43,770	*34,900	34,790	*27,850	25,000					*21,980	19,670	8.95 m
	-5 ft	lb	*69,225	*69,225	*96,496	*96,496	*76,941	76,699	*61,399	55,116					*48,458	43,365	29.4 ft
	-3.0 m	kg	*43,890	*43,890	*37,740	*37,740	*30,610	*30,610	*24,000	*24,000					*21,280	*21,280	8.05 m
	-10 ft	lb	*96,761	*96,761	*83,202	*83,202	*67,483	*67,483	*52,911	*52,911					*46,914	*46,914	26.4 ft
	-4.5 m	kg			*28,200	*28,200	*22,570	*22,570							*18,960	*18,960	6.71 m
	-15 ft	lb			*62,170	*62,170	*49,758	*49,758							*41,800	*41,800	22.0 ft
Boom: 8.4 m GP 27'7" GP	10.5 m	kg												*20,930	*20,930	7.98 m	
	35 ft	lb												*46,143	*46,143	26.2 ft	
Arm: 2.95 m ME 9'8" ME	9.0 m	kg						*20,980	*20,980	*19,710	*19,710			*19,670	*19,670	9.21 m	
	30 ft	lb						*46,253	*46,253	*43,453	*43,453			*43,365	*43,365	30.2 ft	
Shoe: 900 mm 36"	7.5 m	kg						*22,100	*22,100	*19,870	*19,870			*19,040	17,540	10.07 m	
	25 ft	lb						*48,722	*48,722	*43,806	*43,806			*41,976	38,669	33.0 ft	
CWT: 16 100 kg 35,500 lb	6.0 m	kg				*29,430	*29,430	*23,880	*23,880	*20,700	20,670	*18,820	16,090	*18,710	15,700	10.65 m	
	20 ft	lb				*64,882	*64,882	*52,646	*52,646	*45,636	45,569	*41,491	35,472	*41,248	34,613	34.9 ft	
	4.5 m	kg					*25,850	*25,850	*21,740	19,930	*19,180	15,750	*18,560	14,610	11.00 m		
	15 ft	lb					*56,989	*56,989	*47,928	43,938	*42,285	34,723	*40,918	32,209	36.1 ft		
	3.0 m	kg					*27,440	24,890	*22,660	19,230	*19,550	15,370	*18,510	14,080	11.13 m		
	10 ft	lb					*60,495	54,873	*49,957	42,395	*43,100	33,885	*40,808	31,041	36.5 ft		
	1.5 m	kg					*28,220	24,110	*23,170	18,700	*19,660	15,060	*18,490	14,000	11.06 m		
	5 ft	lb					*62,214	53,153	*51,081	41,226	*43,343	33,202	*40,763	30,865	36.3 ft		
	0 m	kg					*34,670	33,040	*28,010	23,720	*23,050	18,390	*19,190	14,910	*18,440	14,410	10.78 m
	0 ft	lb					*76,434	72,841	*61,751	52,294	*50,816	40,543	*42,307	32,871	*40,653	31,769	35.5 ft
	-1.5 m	kg					*32,520	*32,520	*26,770	23,660	*22,030	18,330			*18,250	15,420	10.28 m
	-5 ft	lb					*71,694	*71,694	*59,018	52,161	*48,568	40,411			*40,234	33,995	33.7 ft
	-3.0 m	kg			*33,510	*33,510	*29,220	*29,220	*24,290	23,900	*19,590	18,580			*17,720	17,360	9.51 m
	-10 ft	lb			*73,877	*73,877	*64,419	*64,419	*53,550	52,690	*43,189	40,962			*39,066	38,272	31.2 ft
-4.5 m	kg			*27,570	*27,570	*24,190	*24,190	*19,820	*19,820					*16,380	*16,380	8.41 m	
-15 ft	lb			*60,781	*60,781	*53,330	*53,330	*43,696	*43,696					*36,112	*36,112	27.6 ft	
-6.0 m	kg					*15,720	*15,720									6.81 m	
-20 ft	lb					*34,657	*34,657									22.3 ft	
Boom: 8.4 m GP 27'7" GP	10.5 m	kg												*14,500	*14,500	8.90 m	
	35 ft	lb												*31,967	*31,967	29.2 ft	
Arm: 3.7 m GP 12'2" GP	9.0 m	kg								*18,180	*18,180			*13,720	*13,720	10.02 m	
	30 ft	lb								*40,080	*40,080			*30,247	*30,247	32.9 ft	
Shoe: 900 mm 36"	7.5 m	kg								*18,690	*18,690	*17,500	16,690	*13,390	*13,390	10.81 m	
	25 ft	lb								*41,204	*41,204	*38,581	36,795	*29,520	*29,520	35.5 ft	
CWT: 16 100 kg 35,500 lb	6.0 m	kg				*27,360	*27,360	*22,580	*22,580	*19,710	*19,710	*17,890	16,400	*13,400	*13,400	11.36 m	
	20 ft	lb				*60,318	*60,318	*49,780	*49,780	*43,453	*43,453	*39,441	36,156	*29,542	*29,542	37.3 ft	
	4.5 m	kg				*31,370	*31,370	*24,760	*24,760	*20,940	20,280	*18,500	15,970	*13,660	13,400	11.68 m	
	15 ft	lb				*69,159	*69,159	*54,586	*54,586	*46,165	44,710	*40,785	35,208	*30,115	29,542	38.3 ft	
	3.0 m	kg				*34,530	*34,530	*26,690	25,410	*22,100	19,520	*19,110	15,520	*14,230	12,930	11.81 m	
	10 ft	lb				*76,126	*76,126	*58,841	56,019	*48,722	43,034	*42,130	34,216	*31,372	28,506	38.7 ft	
	1.5 m	kg				*35,920	33,720	*27,920	24,460	*22,900	18,890	*19,500	15,130	*15,110	12,840	11.74 m	
	5 ft	lb				*79,190	74,340	*61,553	53,925	*50,486	41,645	*42,990	33,356	*33,312	28,307	38.5 ft	
	0 m	kg				*35,660	33,170	*28,230	23,890	*23,140	18,470	*19,460	14,870	*16,480	13,140	11.48 m	
	0 ft	lb				*78,617	73,127	*62,236	52,668	*51,015	40,719	*42,902	32,783	*36,332	28,969	37.7 ft	
	-1.5 m	kg			*28,820	*28,820	*34,160	33,080	*27,540	23,660	*22,620	18,270	*18,670	14,800	*17,270	13,920	11.01 m
	-5 ft	lb			*63,537	*63,537	*75,310	72,929	*60,715	52,161	*49,869	40,278	*41,160	32,628	*38,074	30,688	36.1 ft
	-3.0 m	kg	*29,970	*29,970	*38,250	*38,250	*31,480	*31,480	*25,720	23,740	*21,020	18,340			*17,040	15,380	10.29 m
	-10 ft	lb	*66,072	*66,072	*84,327	*84,327	*69,401	*69,401	*56,703	52,338	*46,341	40,433			*37,567	33,907	33.8 ft
-4.5 m	kg	*37,450	*37,450	*32,640	*32,640	*27,300	*27,300	*22,370	*22,370	*17,490	*17,490			*16,330	*16,330	9.29 m	
-15 ft	lb	*82,563	*82,563	*71,959	*71,959	*60,186	*60,186	*49,317	*49,317	*38,559	*38,559			*36,001	*36,001	30.5 ft	
-6.0 m	kg			*24,420	*24,420	*20,710	*20,710	*16,030	*16,030					*14,450	*14,450	7.87 m	
-20 ft	lb			*53,837	*53,837	*45,658	*45,658	*35,340	*35,340					*31,857	*31,857	25.8 ft	

- Notes: 1. Machine in "Fine Mode-F" (Power Boost) for lifting capacities.
- 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards.
- 3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load.
- 4. Rated loads marked with an asterisk (\*) are limited by hydraulic capacity rather than tipping load.

# Equipment

## STANDARD EQUIPMENT

### Engine

Turbocharged, 4 stroke diesel engine with water cooling, direct injection and charged air cooler

Air filter with indicator

Air intake heater

Cyclone pre-cleaner

Electric engine shut-off

Fuel filter water separator with heater

Alternator, 80 A

### Electric / Electronic control system

Contronics

Advanced mode control system

Self-diagnostic system

Machine status indication

Engine speed sensing power control

Emergency engine stop switch

Automatic idling system

Short cut switch

Safety stop/start function

Adjustable 8inch LCD color monitor

Master electrical disconnect switch

Engine restart prevention circuit

High-capacity halogen lights:

Cab-mounted 2

Frame-mounted 2

Boom-mounted 4

Batteries, 2 x 12 V / 210 Ah

Extra lights on cabin and boom

Travel alarm

Swing alarm

### Frame

Access way with handrail

Hydraulically removable counterweight (CWT body and linkage) 16,100 kg, 35,500 lb

Tool storage area

Side walk-way

Under cover (heavy duty 4.5 mm, 0.2")

Punched metal anti-slip plates

### Undercarriage

Mechanically retractable tracks frame

Hydraulic track adjusters

Greased and sealed track links

Track Guard

Belly cover (10mm, 0.4")

### Hydraulic system

Automatic sensing hydraulic system

Summation system

Priority function, each actuator: Boom, Arm and Swing

Boom-Swing priority valve

ECO mode fuel saving technology

Boom and arm hydraulic regeneration valves

Swing anti-rebound valves

Holding valves on boom and arm

Multi-stage filtering system

Cylinder cushioning

Cylinder contamination seals

Auxiliary hydraulic valve

Automatic two-speed travel motors

## STANDARD EQUIPMENT

Hydraulic oil, ISO VG 46

Pilot control pattern changer

Straight travel pedal

Boom float function without HRV

Work tool management system (up to 20 programmable memories)

Hammer & shear, 1 and 2 pump flow

Hammer & shear: variable flow and pressure pre-setting

### Cab and interior

Silicon oil and rubber mounts with spring

Adjustable operator seat with heater and joystick control console

Control joysticks with 4 switches

Heater & air-conditioner, automatic

Flexible antenna

Radio with MP3 player, USB and Bluetooth

Hydraulic safety lock lever

Cab, all-weather sound suppressed, includes:

Cup holders

Door locks

Tinted glass

Floor mat

Horn

Large storage area

Pull-up type front window

Removable lower windshield

Seat belt

Safety glass

Sun screens, front, roof, rear

Windshield wiper with intermittent feature

Master key

Top hatch opening

Volvo Smart View

### Track shoes

Track shoes, 900 mm, 36" with double grouser

### Digging equipment

Boom: 8.4 m, 27'7"

Arm: 3.7 m, 12'2"

### Service

Tool kit, daily maintenance

## OPTIONAL EQUIPMENT

### Engine

- Block heater: 120 V, 240 V
- Dual stage oil bath pre-cleaner
- Diesel coolant heater, 10 Kw
- Fuel filler pump, 100 l/min, 26.4 gpm, with automatic shut-off
- Reversible cooling fan

### Electric

- Extra lights on cabin, CWT and boom
- Anti-theft code

### Undercarriage

- Full track guard

### Hydraulic system

- Hose rupture valve: boom, arm
- Boom float function with HRV
- Hydraulic piping:
  - Additional return filter
  - Slope & rotator
  - Quick coupler piping
- Hydraulic oil, ISO VG 32, 68
- Hydraulic oil, biodegradable 46
- Hydraulic oil, longlife oil 32, 46, 68
- Hydraulic hose for Artic

### Cab and interior

- One-piece fixed front windshield
- Fabric seat without heater
- Fabric seat with heater and air suspension
- Control joysticks with 3 switch & 1 propotional
- Front rain shield

## OPTIONAL EQUIPMENT

- Falling object guard (FOG)
- Frame-mounted
- Cab-mounted
- Cab-mounted falling object protective structure (FOPS)
- Smoker kit (ashtray and lighter)
- Safety net for front window
- Protection system in boom cylinder, bucket cylinder and swing bearing
- Lower wiper with intermittent control
- Air pressure supply in cabin
- Rear view camera
- Side view camera
- Dig Assist
- On board weighing system
- Specific key

### Track shoes

- 650/750mm, (26"/30") track shoes with double grousers

### Digging equipment

- Boom: 7.25 m, 23'9"
- Arm: 2.95 m, 9'8"

### Service

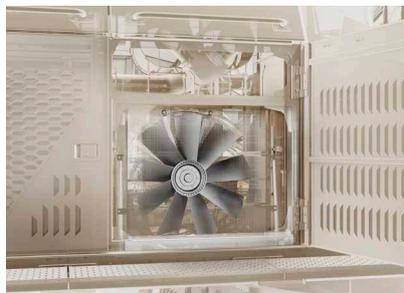
- Tool kit, full scale
- Special tool for retractable frame
- Automatic lubrication system
- Auto fire suppression system

## SELECTION OF VOLVO OPTIONAL EQUIPMENT

### X1/X3 quick fit auxiliary lines



### Reversible cooling fan



### Additional protection options



### Fire Suppression System



### Coolant heater



### Dig Assist, powered by Volvo Co-Pilot



Not all products are available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.

**VOLVO**

**Volvo Construction Equipment**

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